

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>		1. CONTRACT ID CODE	PAGE OF PAGES 1 5
2. AMENDMENT/MODIFICATION NO. <b>28</b>	3. EFFECTIVE DATE See Block 16C	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)
6. ISSUED BY John F. Kennedy Space Center, NASA Procurement Office – ODIN – OP-OS-ODIN Kennedy Space Center, FL 32899	CODE	7. ADMINISTERED BY (If other than Item 6)	CODE
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State, and Zip Code)  OAO Corporation 7375 Executive Place Seabrook, MD 20706-2278		(x) 9A. AMENDMENT OF SOLICITATION NO.  9B. DATED (SEE ITEM 11)  10A. MODIFICATION OF CONTRACT/ORDER NO.  <b>NAS5-98144/NNK05OA12D</b>  10B. DATED (SEE ITEM 13)  December 1, 2004	
CODE	FACILITY CODE		
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS <input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning ___ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.			
12. ACCOUNTING AND APPROPRIATION DATA (If required)			

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.	
	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
X	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: <b>NAS5-98144 Contract Clause C.7 Technology Refreshment Process and FAR Clause 52.212-4 Contract Terms and Conditions-Commercial Items, (c) Changes</b>
	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor ☐ is not, ☒ is required to sign this document and return **1** copies to the issuing office.

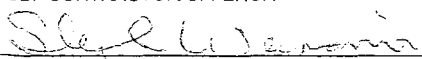
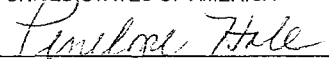
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

**Stennis Space Center --- ODIN SERVICES**

**Technology Infrastructures: Incorporation of SWR XK59 4TMP 04 Rev 01**

**Change in Delivery Order Price: \$156,667.89 (INCREASE)**

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print) Sheryl K. Weimann Contracts Manager	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Penelope A. Hale Contracting Officer
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)	15C. DATE SIGNED 7/13/05
16B. UNITED STATES OF AMERICA BY  (Signature of Contracting Officer)	16C. DATE SIGNED 7/15/2005

1. In accordance with Master Contract NAS5-98144, C.7, Technology Refreshment Process, the technology refreshment services referenced below is hereby incorporated into this Delivery Order at a fixed price of \$156,667.89.

SWR #	Subject	Amount
XK59 4TMP 04 Rev 01	Install fiber cable from B1201 to B4995, install fiber cable from B4995 to B4110 and B4210, install fiber cable from B4100 to B4120 and B4122 and install (2) fiber cables from B4210 to B4220	\$156,667.89

**2. SWR XK59 4TMP 04 Rev 01**

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling (IEEE 802.3, EIA/TIA Building Wiring Standards, National Electric Code, and Fire Protection Code, as applicable), and equipment installation) and materials necessary to install (1) GFE 36MM/288SM fiber cable from room 116 of B1201 to room 151 in B4995 install a 96-strand singlemode fiber cable from room 151 in B4995 to room B101 of B4110, install a 36-strand singlemode fiber cable from room B101 of B4110 to room 109 of B4120, install a 36-strand singlemode fiber cable from room B101 of B4110 to the 3<sup>rd</sup> level of B4122, install (1) 96-strand singlemode fiber cable from room 151 in B4995 to room B103 of B4210, install a 36-strand singlemode fiber cable from room B103 of B4210 to room C501 of B4220, install a 36-strand singlemode fiber cable from room B103 in B4210 to B4220 west pier and install a 36-strand singlemode fiber cable from room 151 of B4995 to B4301 and B4302 to support the new fire alarm systems in the A & B complex for NASA and as outlined in OAO proposal dated June 6, 2005. Installation will include testing, labeling, and configuration documentation (red line drawings).

a. The contractor shall be responsible for performance of the following tasks:

- (1) Install (1) GFE 36MM/288SM fiber cable from room 116 of B1201 to room 151 of B4995.
- (2) Install (1) 96SM fiber cable from room 151 of B4995 thru tunnel to room B101 of B4110.
- (3) Install (1) 36SM fiber cable from room B101 of B4110 thru tunnel to 3<sup>rd</sup> level of B4122.
- (4) Install (1) 36SM fiber cable from room B101 of B4110 thru tunnel to 1<sup>st</sup> level of B4120.
- (5) Install (1) 96SM fiber cable from room 151 of B4995 thru tunnel to room B103 of B4210.
- (6) Install (1) 36SM fiber cable from room B103 of B4210 thru tunnel to level 5 of B4220.
- (7) Install (1) 36SM fiber cable from room B103 of B4210 to west pier of B4220.
- (8) Install (1) 36SM fiber cable from room 151 of B4995 thru duct to room 20 of B4301.
- (9) Install (1) 36SM fiber cable from room 151 of B4995 thru duct to manhole by viewing stand then trench to electrical pole and place two aerial spans, then bore under "P" road and place conduit to existing conduit coming out of B4302.
- (10) Install (2) 19" x 84" stand alone equipment racks in room 151 of B4995
- (11) Install (2) each double sided vertical troughs in room 151 of B4995.
- (12) Remove existing LGX panels from old stand alone equipment rack and put into one of the new stand alone equipment racks in room 151 of B4995.
- (13) Install (2) LST1U-144/9 termination shelf in room 116 of B1201.

- (14) Install (6) LST1U-144/9 termination shelf in one of the new stand alone equipment racks in room 151 of B4995.
- (15) Install (2) Century 96-port fiber cabinets in the basement of B4110 and B4210.
- (16) Install (1) Avaya 400A LIU in B4120, B4122, B4301, & B4302.
- (17) Install (2) Avaya 400A LIU in B4220. One will be on level 5 and the other on the west pier.
- (18) Bore road "P" near B4302 and place 2" pipe so that the new fiber can be placed under the road.
- (19) Terminate all fiber into ST connectors and place in LGX or LIU's at each building.
- (20) Test and label all fiber and provide test results to OAO.
- (21) Provide redline drawing showing route of fiber cable in each building to OAO so that draftsman can update drawings.
- (22) Provide redline drawing showing route of fiber cable from B1201 thru manholes to B4995 and from B4995 out to B4302.

b. The contractor shall provide the following material:

- (1) 11,500 feet of Corning Altos 36SM fiber cable (372-COR8.3-LTD-36)
- (2) 4,500 feet of Corning Altos 96SM fiber cable (372-COR8.3-LTD-96)
- (3) 1,464 each cool cure consumables (142172)
- (4) 1,392 each P3020A-C-125 singlemode fiber connectors (157475)
- (5) 840 each A3000 singlemode ST coupler (184326)
- (6) 552 each C3000A-2 singlemode ST coupler (105263)
- (7) 250 feet of 2" pipe to go under road at B4302.
- (8) 250 feet of 2" road bore
- (9) 72 each P2020C-C-125 multimode ST connector (170290)
- (10) 72 each A2000 multimode ST coupler (184324)
- (11) 12 each fiber marker poles
- (12) 8 each LST1U-144/9 termination shelf (172178)
- (13) 8 packs of 1200ST fiber panels for LST1U-144/9 termination shelf (178743)
- (14) 6 each cable management panels (255261)
- (15) 6 each Avaya 400A LIU with lock (134146)
- (16) 6 each 1000ST fiber panels for 400A LIU's (106730)
- (17) 6 each Ortronics cable management (255261)
- (18) 5 packs Premier black tie wraps (739308)
- (19) 5 each double sided vertical trough (166031)
- (20) 4 each Century 96-port fiber cabinet (FCL-96SL-LM96)
- (21) 3 each 19" x 84" aluminum equipment rack (143592)
- (22) 2 rolls Terra tape sentry line detectable 6" x 1000' (251465)

c. Schedule: The completion of this effort shall be (24) weeks after receipt of a signed modification.

3. Part II "Contract Administration Data", Item 4, is revised as indicated below to incorporate the increase of \$156,667.89 for this infrastructure upgrade:

Month/Mod	Description	Monthly Total	Actual Total To Date
Jun-05	Ordered Seats and Services	400,302.61	2,766,444.30
Apr-05	Catalog Services	5,216.36	186,325.28
Apr-05	Specialized Services	396.85	749.82
Mod 23	Infrastructure upgrades	724.04	484,686.35
	Fast Track Mods Authorized (but not incorporated by Mod)	31,601.00	31,601.00
	sub-total of ordered services	\$ 438,240.86	\$ 3,469,806.75
May-05	Less facility credit	-	-
May-05	Less outage credit	-	(604.88)
	Less retainage not earned	-	8,425.56
<b>TOTAL</b>		<b>\$ 438,240.86</b>	<b>\$ 3,477,627.43</b>

4. Part V "Technology Infusion (Infrastructure Upgrades)", Item 3 is modified to include the subject infrastructure upgrades. The signed date and completion date will be completed in a future infrastructure upgrade modification.

Mod	Description	Date Signed	Amount
28	Install fiber cable from B1201 to B4995, install fiber cable from B4995 to B4110 and B4210, install fiber cable from B4100 to B4120 and B4122 and install (2) fiber cables from B4210 to B4220		\$156,667.89

5. Payment Schedule: Invoicing and Payment for this modification will be made in accordance with Master Contract NAS5-98144, FAR 52.212-4: Commercial Items (May 1997) (Modified) in accordance with the following:

**Phase I:**

Payment of \$48,391.09 shall be paid upon receipt of all material as verified by the DOCOTR or designee.

**Phase II:**

Payment of \$54,138.40 after all fiber cable has been installed to each building and verified by the DOCOTR or designee.

**Phase III:**

Payment of \$54,138.40 once all equipment racks, fiber panels, fiber couplers, fiber terminations have been placed, the fiber tested and completion of the job as verified and accepted by the DOCOTR or designee,

6. Reporting requirements: The contractor shall provide monthly status reports to the SSC DOCOTR, with a copy to the DOCO. These reports shall include, as a minimum, installation progress, and potential problem areas.

7. In consideration of the modification agreed to herein as complete equitable adjustment for the changes set forth, the Contractor hereby releases the Government from any and all liability under this delivery order for further equitable adjustments attributable to such facts or circumstances giving rise to these changes.
8. All other terms and conditions of this Delivery Order remain unchanged and in full force and effect.